

GLOTEL HAS MADE EVERY EFFORT TO CREATE COMPLETE AND ACCURATE CONTRACT DOCUMENTS WITH THE BEST INFORMATION AVAILABLE AT THE TIME OF THEIR COMPLETION. CONTRACTORS ARE CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE CONTRACT DOCUMENTS MAY OCCUR AND SHALL NOT EXCUSE THE CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THE DOCUMENTS. REFERENCE ADMINISTRATIVE REQUIREMENTS.

1. THE CONTRACT DOCUMENTS INCLUDE THE AGENCY APPROVED PROJECT SPECIFICATIONS, PLANS, AND THEIR LATEST REVISIONS, ADDENDA, AND CLARIFICATIONS. THE CONTRACT DOCUMENTS MAY ALSO INCLUDE NETWORK CARRIER STANDARDS FOR INSTALLATION OF TELECOMMUNICATIONS EQUIPMENT.

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED (INCLUDING FEES) TO COMPLETE THE WORK DESCRIBED BY THE CONSTRUCTION DOCUMENTS.
2. PRIOR TO BIDDING, THE CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE PROJECT SITE AND CONTRACT DOCUMENTS TO UNDERSTAND THE DESIGN AND CONDITIONS AFFECTING THE WORK TO BE PERFORMED. ANY ERRORS, OMISSIONS, AND DISCREPANCIES MUST BE SUBMITTED TO THE PROJECT TEAM VERBALLY AND IN WRITING.
3. THE CONTRACTOR SHALL PROVIDE A WARRANTY FOR WORK FOR A PERIOD OF ONE YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REMEDY ALL FAULTY, INFERIOR, AND/OR IMPROPER MATERIALS, DAMAGED GOODS, AND/OR FAULTY WORKMANSHIP. ALL ROOFING AND WATERPROOFING MUST BE WARRANTED FOR A PERIOD OF TWO YEARS. THE PERIOD BEGINS AT SUBSTANTIAL COMPLETION OF THE PROJECT.
4. THE CONTRACTOR SHALL PROVIDE A COPY OF LICENSE AND INSURANCE TO THE TELECOMMUNICATIONS CARRIER.

1. THE CONTRACTOR SHALL PROVIDE OSHA COMPLIANT PROTECTION FOR THE SAFETY OF THE SITE STAFF AT ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT.

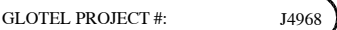
1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY AGENCIES PRIOR TO WORK WITH UTILITIES.
2. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO WORK.
3. CONTRACTOR TO PROTECT, REPLACE AND/OR REROUTE ANY EXISTING UTILITIES ENCOUNTERED DURING THE COURSE OF WORK.

1. ALL PENETRATIONS TO EXISTING STRUCTURES MUST BE SEALED WITH APPROVED WEATHERPROOFING. IF WEATHERPROOFING IS OMITTED, CONTACT THE PROJECT TEAM FOR CLARIFICATION OR PROVIDE A WEATHERPROOFING PROPOSAL FOR APPROVAL.

1. ALL WORK MUST BE PERFORMED DURING THE OWNERS PREFERRED HOURS.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
3. ALL WORK PERFORMED ON THE PROJECT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS. SEE STRUCTURAL NOTES.
4. IF INSPECTION OF WORK IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE INSPECTION ENTITY 24 HOURS IN ADVANCE OF THE WORK TO BE PERFORMED.
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY AGENCIES PRIOR TO WORK WITH UTILITIES. REFERENCE UTILITIES SECTION.
6. THE CONTRACTOR SHALL COORDINATE ON-SITE STORAGE WITH OWNER IN ADVANCE OF WORK. PERMITS MAY BE REQUIRED FOR STORAGE ON PUBLIC RIGHT OF WAY.
7. ALL NEW CONSTRUCTION SHALL MATCH EXISTING CONSTRUCTION IN FORM, TEXTURE, FINISH, AND IN MATERIALS EXCEPT AS NOTED IN THE CONSTRUCTION DOCUMENTS.
8. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT EXISTING WORK FROM DAMAGE DURING THE COURSE OF WORK FOR THIS PROJECT.
9. THE CONTRACTOR SHALL PROVIDE WORK WHICH IS LEVEL, PLUMB, AND WITHIN TOLERANCES SPECIFIED BY CODES AND STANDARDS INCLUDED IN THE STRUCTURAL NOTES.
10. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
11. ANY SUBSTITUTIONS OF MATERIALS MUST BE APPROVED BY THE PROJECT TEAM IN WRITING.
12. THE CONTRACTOR SHALL SUPPLY ALL MATERIALS INCIDENTAL TO THE WORK DESCRIBED BY THE CONTRACT DOCUMENTS.
13. THE CONTRACTOR MUST RESTORE ALL PORTIONS OF THE PROJECT SITE TO IT'S PRE-WORK CONDITION. WHERE THE WORK PERFORMED DOES NOT ALLOW FOR PRE-WORK RESTORATION, WORK AREAS MUST BE REPAIRED OR REPLACED TO MATCH EXISTING FINISH AND SITE GRADING.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL DISPOSAL OF DEBRIS AND ITEMS WHICH ARE SPECIFIED TO BE REMOVED IN THE COURSE OF WORK.

1. ALL CONCRETE DESIGN DESCRIBED BY THIS SET OF DRAWINGS IS BASED ON ACI 318
2. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. UNLESS SPECIFIED OTHERWISE.
3. EACH CONCRETE MIX DESIGN SHALL HAVE A CYLINDER TEST HISTORY OF 60 DAYS MINIMUM, TESTED IN ACCORDANCE WITH ASTM C39, TESTED BY AN ACI CERTIFIED STRENGTH TESTING TECHNICIAN, AND THE STRENGTH STATISTICALLY DETERMINED IN ACCORDANCE WITH ACI 318, EACH MIX DESIGN USED ON SITE SHALL BE SUBMITTED TO, AND RECEIVED BY THE PROJECT TEAM BEFORE THE CONCRETE IS PLACED ON SITE.
4. RAW MATERIALS, MANUFACTURE, AND DELIVERY TO THE FORMWORK SHALL BE IN ACCORDANCE WITH ASTM C94 AND ACI 318.
5. EMBEDDED ITEMS ARE TO BE SECURELY FASTENED SO THAT THEY DO NOT MOVE DURING PLACEMENT OF THE CONCRETE. REFERENCE THE REINFORCING STEEL SECTION.
6. TWO CYLINDERS SHALL BE TAKEN FOR EACH LOAD DELIVERED TO THE FORMWORK. SAMPLES ARE TO BE TAKEN FROM THE CONCRETE AS IT IS PLACED IN THE FORMWORK IN ACCORDANCE WITH ASTM C172. CYLINDERS ARE TESTED PER ASTM C39 AND TESTED BY AN ACI CERTIFIED CSTT. CONCRETE SAMPLES ARE TO BE TESTED FOR AIR CONTENT AND WATER CEMENT RATIO. ALL TEST RESULTS ARE SUBMITTED TO THE PROJECT TEAM WITHIN ONE MONTH OF PLACING THE CONCRETE ON SITE.
7. WHEN AMBIENT TEMPERATURES FALL BELOW 55 DEGREES FAHRENHEIT, THE CONTRACTOR SHALL FOLLOW GUIDELINES DESCRIBED IN ACI 306.1, WHEN AMBIENT TEMPERATURES RISE ABOVE 90 DEGREES FAHRENHEIT, THE CONTRACTOR SHALL FOLLOW GUIDELINES DESCRIBED IN ACI 305.1, THE CONCRETE SHALL BE PROTECTED FROM FREEZING OR FROM EXCESSIVE HEAT WITH TENTS OR BLANKETS TO PROVIDE FOR HEAT OR MOISTURE LOSS.

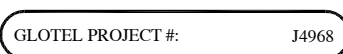
City of Kirkland
Reviewed by J Tumelson
07/05/2016



24"x36" SCALE: $1/4" = 1'-0"$
11"x17" SCALE: $1/8" = 1'-0"$



ENLARGED SITE PLAN	1
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24"x36" SCALE: $\frac{3}{8}" = 1'-0"$
11"x17" SCALE: $\frac{3}{16}" = 1'-0"$



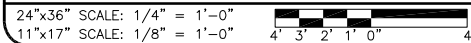
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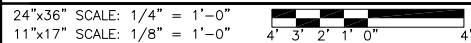
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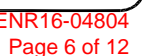
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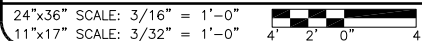


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NOTES:

1. VERIFICATION THAT THE ANTENNA MOUNTS CAN SUPPORT ALL PROPOSED LOADING SHALL BE PERFORMED BY A REGISTERED STRUCTURAL ENGINEER
2. STRUCTURAL ANALYSIS AND DESIGN TO BE PERFORMED PRIOR TO FCD COMPLETION
3. ALL PROPOSED A&T ANTENNAS, CABLEING & ASSOCIATED EQUIPMENT TO BE PAINTED TO MATCH EXISTING UTILITY POLE.



2

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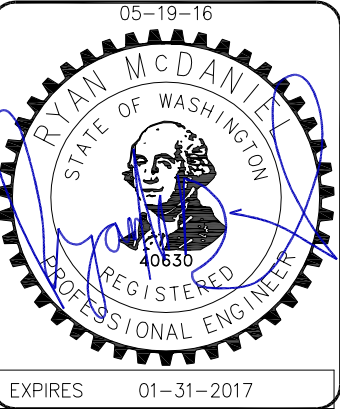
City of Kirkland
Reviewed by J Tumelson
07/05/2016



RFDS: V 3.0 DATED: 04/28/2016

SB77
JUANITA POINT

11525 JUANITA DR NE
KIRKLAND, WA 98304
KING COUNTY



REVISIONS			
REV.	DATE	DESCRIPTION	BY
A	01/13/16	ISSUED FOR 90% CD REVIEW	AF
B	05/06/16	ISSUED FOR REV 90% CD REVIEW	RLD
O	05/19/16	FINAL CONSTRUCTION DRAWINGS	CBK

TITLE
RF DETAILS

SHEET

A-7

GLOTEL PROJECT #: J4968

NOT USED
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11"x17" SCALE: N.T.S.

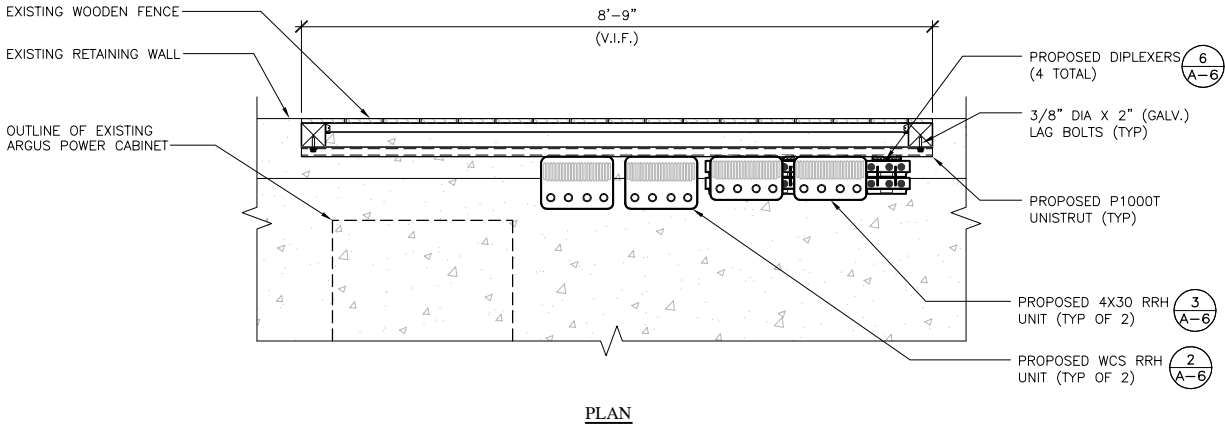
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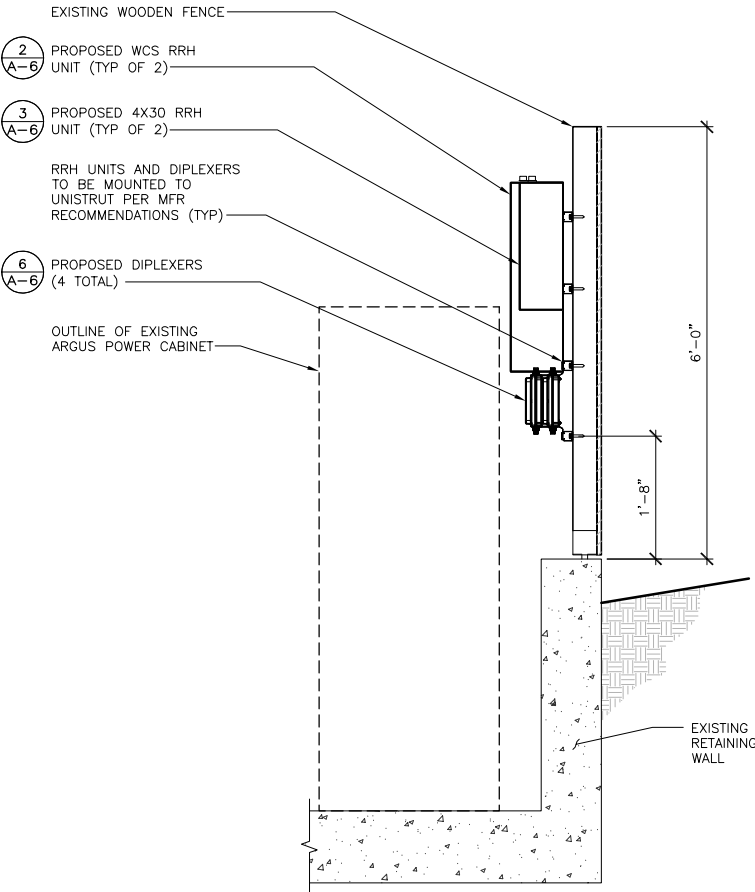
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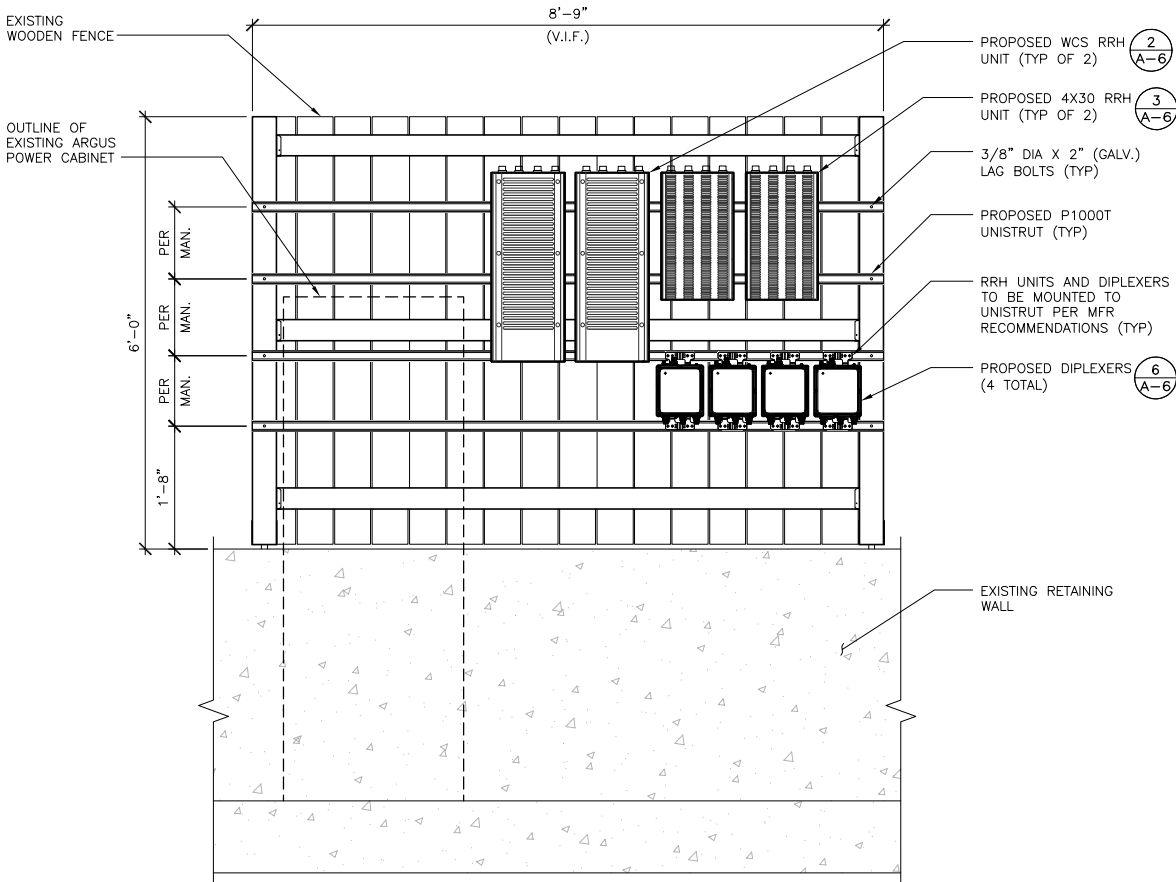
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PLAN











ELEVATION



ELEVATION

RRH MOUNTING
24"x36" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"

1

SYMBOL	DESCRIPTION
	COPPER GROUND ROD
	CADWELD
	EXOTHERMIC WELD
	TEST WELL
	GROUND BAR
	GROUND WIRE
	#2 AWG GROUND RING
	FIELD VERIFY & TIE INTO EXISTING GROUNDING SYSTEM

GENERAL NOTES:

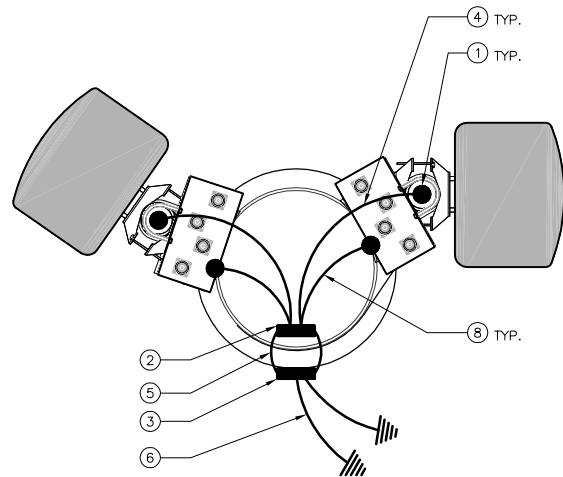
- ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING GROUND WIRES AND CONNECT TO SURFACE MOUNTED BUS BARS. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS AND EXIT FROM TOWER OR POLE USING MFR'S PRACTICES.
- ALL GROUND CONNECTIONS SHALL BE CADWELD. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE GREEN INSULATED WIRE ABOVE GROUND.
- CONTRACTOR TO VERIFY AND TEST GROUND SOURCE, GROUNDING AND OTHER OPERATIONAL TESTING WILL BE WITNESSED BY VERIZON WIRELESS, REPRESENTATIVE.
- REFER TO DIVISION 16 GENERAL ELECTRIC; GENERAL ELECTRICAL PROVISION AND COMPLY WITH ALL REQUIREMENTS OF GROUNDING STANDARDS.
- ELECTRICAL CONTRACTOR TO PROVIDE DETAILED DESIGN OF GROUNDING SYSTEM, AND RECEIVE APPROVAL OF DESIGN BY AUTHORIZED AT&T MOBILITY, REPRESENTATIVE, PRIOR TO INSTALLATION OF GROUNDING SYSTEM. PHOTO DOCUMENT ALL CADWELDS AND GROUND RINGS.
- NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
- USE PANI SCHEME FOR LOADING GROUNDS ON MGB AS DISCUSSED IN NSTD 119, 33 & 36.

GROUND ROD NOTES:

- ELECTRICAL CONTRACTOR SHALL ORDER GROUND RESISTANCE TESTING ONCE THE GROUND SYSTEM HAS BEEN INSTALLED; A QUALIFIED INDIVIDUAL, UTILIZING THE FALL OF POTENTIAL METHOD, SHOULD PERFORM THE TEST. THE REPORT WILL SHOW THE LOCATION OF THE TEST AND CONTAIN NO LESS THAN 9 TEST POINTS ALONG THE TESTING LINE, GRAPHED OUT TO SHOW THE PLATEAU.
- POINT GROUND TEST OR 3 POINT 62% TESTS WILL NOT BE ACCEPTED AS ALTERNATIVES TO THE AFORE MENTIONED GROUND TESTS. TEST SHALL BE PERFORMED WHILE THE COUNTERPOISE IS ISOLATED FROM THE A/C SYSTEM GRIDS AND EXISTING COMMUNICATIONS FACILITY.

KEY NOTES:

- ① CADWELD (TYP.) SEE SHEET E-2.
- ② ANTENNA LEVEL GROUND BAR SEE SHEET E-2
- ③ GROUND BUS BAR AT BASE OF POLE.
SEE SHEET E-2
- ④ #6 AWG GROUND FROM ANTENNA TO TIE INTO
ANTENNA GROUND BAR (TYP). SEE SHEET E-2
- ⑤ #2 AWG GROUND FROM ANTENNA GROUND BUS BAR
TO UTILITY POLE GROUND BUS BAR (TYP OF (2)
PLACES). SEE SHEET E-2
- ⑥ #2 AWG GROUND TO TIE INTO NEW POLE GROUND
RING. (TYP OF (2) PLACES)
- ⑦ #6 AWG RRH MOUNT GROUND TO SECTOR GROUND
BAR (TYP) (FIELD VERIFY). SEE SHEET E-2
- ⑧ #6 AWG TMA MOUNT GROUND TO SECTOR GROUND
BAR (TYP). SEE SHEET E-2
- ⑨ PROPOSED RRH GROUND BAR. SEE SHEET E-2



ANTENNAS AT 57'-0" AGL RAD CENTER

24"x36" SCALE: 1-1/2" = 1'-0"
11"x17" SCALE: 3/4" = 1'-0"

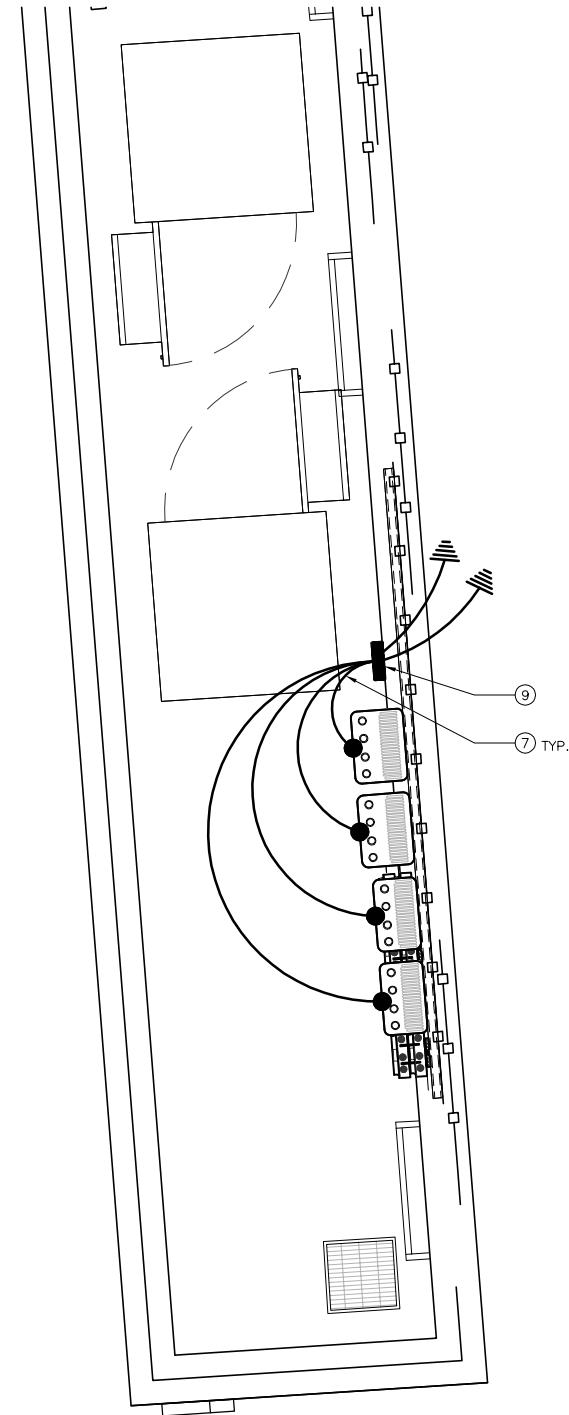
ANTENNA GROUNDING SCHEMATIC

2

7. NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
8. USE PANI SCHEME FOR LOADING GROUNDS ON MGB AS DISCUSSED IN NSTD 119, 33 & 36.

GROUND ROD NOTES:

1. ELECTRICAL CONTRACTOR SHALL ORDER GROUND RESISTANCE TESTING ONCE THE GROUND SYSTEM HAS BEEN INSTALLED; A QUALIFIED INDIVIDUAL, UTILIZING THE FALL OF POTENTIAL METHOD, SHOULD PERFORM THE TEST. THE REPORT MUST SHOW THE TEST RESULTS, CONTAINING LESS THAN 9 TEST POINTS ALONG THE TESTING LINE, GRAPHED OUT TO SHOW THE PLATEAU.
2. POINT GROUND TEST OR 3 POINT 62% TESTS WILL NOT BE ACCEPTED AS ALTERNATIVES TO THE AFORE MENTIONED GROUND TESTS. TEST SHALL BE PERFORMED WHILE THE COUNTERPOISE IS ISOLATED FROM THE A/C SYSTEM GRIDS AND EXISTING COMMUNICATIONS FACILITY.



City of Kirkland
Reviewed by J Tumelson
07/05/2016

24"x36" SCALE: $\frac{3}{4}" = 1'-0"$
11"x17" SCALE: $\frac{3}{8}" = 1'-0"$

EQUIPMENT GROUNDING SCHEMATIC

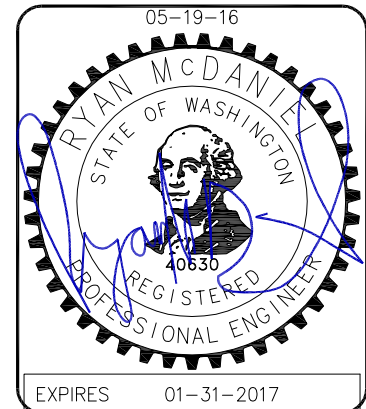
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RFDS: V 3.0 DATED: 04/28/2016

SB77
JUANITA POINT

11525 JUANITA DR NE
KIRKLAND, WA 98304
KING COUNTY

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TITLE
SCHEMATIC GROUNDING PLAN

SHEET

E-1

GLOTEL PROJECT #: J4968



RFDS: V 3.0 DATED: 04/28/2016

SB77
JUANITA POINT

11525 JUANITA DR NE
KIRKLAND, WA 98304
KING COUNTY

[illegible]

TITLE	
GROUNDING DETAILS	
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SHEET

E-2

GLOTEL PROJECT #: J4968

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13

NOT USED 12

NOT USED

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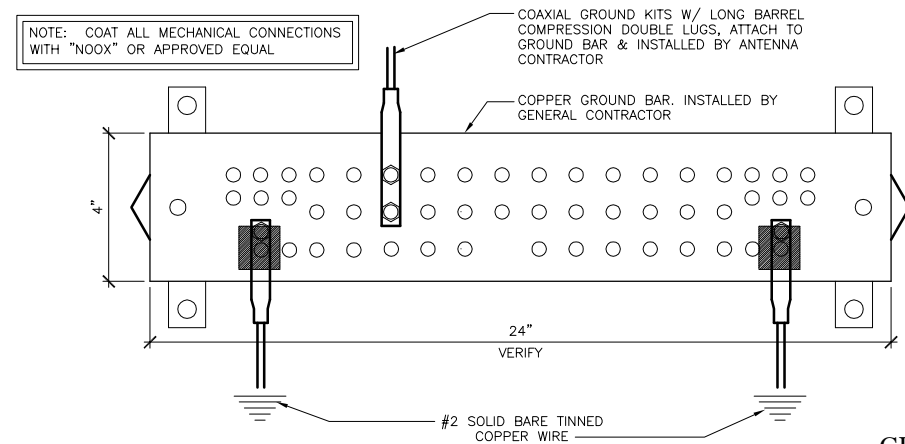
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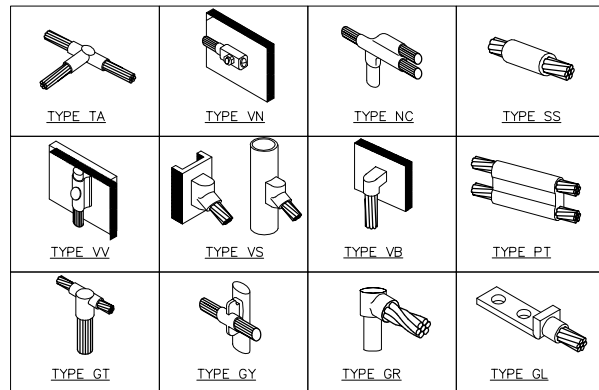
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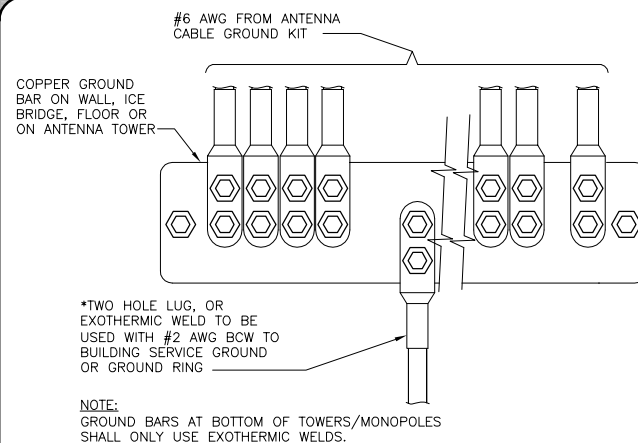
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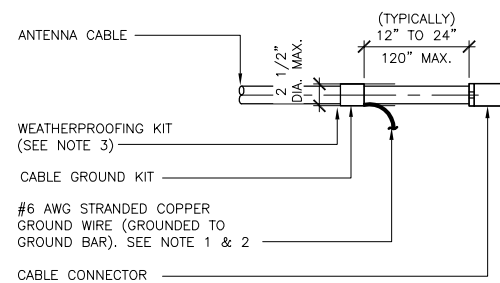
GROUND BAR (5)
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CADWELD GROUNDING CONNECTIONS



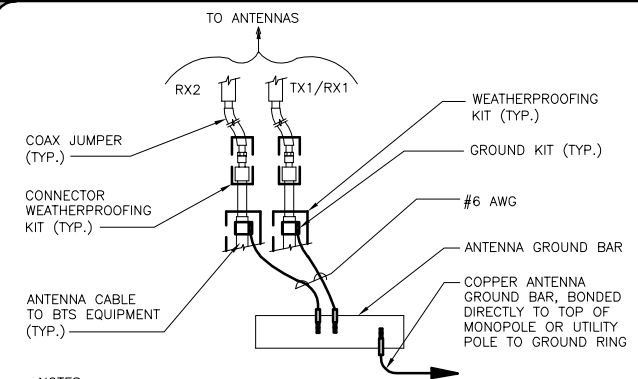
GROUNDWIRE INSTALLATION



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

CABLE GROUND KIT CONNECTIONS



NOTES:
DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE
DOWN TO ANTENNA GROUND BAR.

WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

GROUNDING CABLE CONNECTIONS

24"x36" SCALE: N.T.S.
11"x12" SCALE: N.T.S.

1

GROUNDING CABLE CONNECTIONS